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Metaphors are effective rhetorical devices to explain ideas, organize information, and illuminate understanding. Metaphor is a process of comparing and identifying one thing with another. Two basic principles of instruction are to go from the known to the unknown and to go from the concrete to the abstract. Metaphors do this by using concrete examples to explain abstract principles. This paper explores the use of metaphors to improve understanding, the role of metaphors in education, and five metaphors related to the roles, responsibilities, and relationships of teachers. These metaphors are teachers as parents, as gardeners, as prophets, as pearl oysters, and as physicians. The paper concludes that by using metaphors and visual images, teachers can arrive at a deeper understanding of their roles and responsibilities as educators, the nature of education, and the relationships between the teacher and student. (ND)

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Five Metaphors for Educators

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Abstract

Briefly explores the use of metaphors to improve understanding, the role of metaphors in education, and five metaphors related to the roles, responsibilities and relationships of teachers: teachers as parents, gardeners, prophets, pearl oysters and physicians.

While metaphors do not fully explain and are not completely reliable, their explanatory power and ability to organize information and illuminate understanding is well recognized. Metaphors help name and extend the meanings of things, but can become so much a part of our language and thinking that we are often unaware of them, and when we are, we often do not think very deeply about their implications. An example is the following metaphors for ideas: food (half-baked, swallow, meaty), light (insightful, brilliant, illuminating), people (lives, immature, clever), plants (fruitful, seed, branches), products (produce, generate, work), commodities (buy, market, value), resources (waste, use, pool), money (rich, bankrupt, treasure), cutting tool (incisive, sharp, cuts-to-the-heart) and fashion (trend, dated, vogue) (Lakoff and Johnson, 1980).

Using metaphorical concepts, such as the teacher as coach, conductor, manager, or counselor, has been a common and useful practice in the education and development of teachers. As educators teach ideas, all of the above metaphors for ideas can be extended to include them. The use of metaphors to improve understanding, the role of metaphors in education, and five metaphors related to the roles, responsibilities and relationships of teachers: parents, gardeners, prophets, pearl oysters and physicians, will be briefly explored.

Metaphor

The metaphor is considered by such notables as Quintilian, the great first century rhetorician, as "the commonest and by far the most beautiful" of the figures of speech (Cited in McArthur, 1992, p. 653). The metaphor is a rhetorical device said to have originated with Aristotle in the 4th century BC (McArthur, 1992). Aristotle used the term metaphor in two senses. The first sense refers to all figures of speech that use association, comparison and resemblance. In the second sense, the comparison is implied by an identification of the two things compared. The broader meaning of metaphor is used in this paper, as in Aristotle's first sense above and by Simpson below.

Metaphor is a process of comparing and identifying one thing with another. Then, as we see what things have in common, we see the general meaning they have. Now, the ability to see the relation between one thing and another is almost a definition of intelligence. Thinking in metaphors. . . is a tool of intelligence. Perhaps it is the most important tool. (Cited in Hatcher, 1987, p. 80)

Wright states in *Theology and Literature*, "If narrative is the way we construct our sense



of identity, metaphor is how we think, especially in areas in which we need to build our knowledge of the unknown by comparison with the known" (Cited in McArthur, 1992, p. 654). Some argue that "the human conceptual system is metaphorically structured and defined" (Lakoff and Johnson, 1980, p. 6). Language, as a vehicle to convey form and meaning to reality, constantly utilizes metaphors to explain reality by comparing one thing to something else. Some consider all language metaphorical.

Figures of speech, which may be described as non-literal ways of rendering meaning, are a peculiarly important part of diction. Some students of language go so far as to say that there is no completely literal speech because all language is basically metaphorical. They maintain that all language was born through some process of comparing one thing with another. (Weaver, 1967, p. 248-9)

Metaphors depend on finding a certain amount of similarity when comparing dissimilar things. It consists of tenor, the thing, vehicle, the thing to which it is compared, and meaning, the understanding resulting from comparing the things. Metaphors can shed light on our understanding and conception of each reality compared. The four main functions of a metaphor are to give concreteness, clarify the unknown, express the subjective, and assist thought (Weaver, 1967).

Metaphors and Education

Two basic principles of instruction are to go from the known to the unknown and to go from the concrete to the abstract. Metaphors do that by using concrete examples to explain abstract principles. A known, visible, or physical reality will be used to help describe an unknown, invisible, or spiritual reality. Often a limited vocabulary and comprehension require the use of comparisons to move a person from an understanding of one concept to an understanding of another.

Radical constructivism views knowledge as a personal construct, an interpretive process to make sense in terms of prior knowledge. Teachers make sense of experiences based on what is known and what is believed. Teachers construct images and models of teaching based upon their prior knowledge and experiences (Johnson 1987).

Metaphors can help construct or reconstruct images of these categories and make sense of what happens in educational endeavors. Educators reflect on what they are doing as they teach (Schon, 1983). It is possible to develop the reflections, images and practices of a teacher by using metaphors. Metaphors can change and improve what happens in classrooms by helping teachers make sense of their roles and responsibilities as they reflect on their practice to better improve their teaching. This reflection occurs within the context of their conceptualized roles of the teacher. What educators believe about teaching, students and education affects their view of events in the classroom, their reflections, their sense of what to do and their evaluation of what is right and wrong. These beliefs are often formed in childhood and affect what preservice teachers learn about becoming teachers (Kagan, 1992).



Most new teachers have spent years as students observing and participating in activities with teachers. Through these experiences they have developed images, ideals and models of what teachers are. As students become teachers, they begin to reconstruct this knowledge based upon their new experiences from the perspective of teachers. This may result in conflict, discrepancies and, hopefully, new and improved knowledge and practice. Often new teachers are operating from generalized beliefs, images or metaphors that may negatively affect their teaching. Two such common metaphors are "teacher as friend" and "teacher as strict authoritarian." Many new teachers must learn through painful experience that these approaches generally do not work.

Individual teaching metaphors do not exist in isolation. They are found within a context or a dominant metaphor about what teaching students in education is. Teaching metaphors operate under a more overriding myth or metaphor about schooling, such as the school as work place.

Adherence to the myth of the school-as-work-place is evident in the management of schools within the traditional culture. Teachers manage so as to maintain control of student thinking and behavior. Rather than placing responsibility for behavior and learning on the student, teachers arrange students so that they cannot interact with one another and assign tasks that keep students busily engaged in activities of the teacher's choosing. Keeping busy and task completion are regarded as desirable and often are rewarded in the evaluation procedures that are implemented in the traditional culture. Just as control is emphasized in the sense that employers and shop stewards control employees, teachers control students in traditional classrooms. Management is seen as the first consideration, and initiate into the culture are seen exposed to the conventional wisdom of gaining control in the first few days." (Tobin, 1990, p. 6)

The teacher as authoritarian boss model is an extension of the school as a work place metaphor. If a teacher were to use the school as learning place metaphor as opposed to the school as work place metaphor, one would expect the classroom and teaching to be arranged to facilitate learning as opposed to facilitating order and production. The organizational design and allocation of resources in the school would be different as would the relationship between the teacher and learner in these two metaphors. Some teachers see their role as a manager, dictator or drill sergeant which puts the teacher in the active role and the students in the passive role as with the teacher as a dispenser of knowledge.

Sometimes the language used to describe our belief and behavior is what we wish for or the ideal we hope to achieve, not of the real experience. The teacher may describe herself as a facilitator or a guide but may act as a director or dispenser. The teacher operating under the metaphor of entertainer will behave differently than the teacher operating under the metaphor of captain of the ship. A teacher may for one day or period operate using one metaphor and for another day or period use another. When the classes are uncooperative or unresponsive and must be directed and controlled, teachers often take the role of demanding captain, leader, disciplinarian and task master. When the classes are more ideal, teachers can operate under more ideal



metaphors.

Because teaching is such a complex activity, teachers may find themselves operating under several metaphors at once. One teacher conceptualized her role of teacher as a saintly facilitator, a comedian, and a miser (Tobin, 1990). The saintly facilitator role applied only to the ideal class, which is what she thought teaching should be like. When she actually taught, she was in the role of comedian, entertaining the class. When that was not successful, she became a miser with her time and effort.

If the school and teaching metaphors are mixed or are not congruent, one can expect problems. Teachers who deviate too noticeably from that dominate metaphor of the school community are often subject to exclusion, derision or nonsupport from others in their educational community. Such teachers challenge the dominant mind set, belief and metaphors of the institution and culture within which they operate. Often teachers find it more convenient, comfortable and profitable to either follow the dominant metaphors of their institutions or to be circumspect about their own beliefs and practices. Those who are not must be prepared for the consequences of being different in institutions that value conformity.

This valuing of conformity also is based upon underlying metaphors, beliefs, and values. In the same way that the group metaphor or beliefs have influence on the individuals, individuals' metaphors and beliefs can also influence and change group metaphors and beliefs.

The change of metaphor can dramatically influence one's beliefs and practices. An example is given by Tobin (1990) of a teacher who reconceptualized her role as manager to that of social director in which she would invite the students to be a party of learning, rather than trying to manage or dictate the role of students in the classroom. Students in the metaphor of teacher as social director can choose to come or not come, but if they do not come, they should not disrupt the guests who have decided to participate in the learning and should be courteous to their host. By changing the metaphor the teacher was able to eliminate student behavior almost overnight. The teacher was able to construct a vision of what teaching and learning could be like, to envision herself and her students in those roles and to develop a commitment to changing according to that metaphor. She then could reconstruct images of what happens to her as she applies this new vision in her classrooms.

Teachers' construction of their knowledge and their world view is important in the change process. Teachers often feel discomfort when they find themselves operating according to metaphors that are not complementary to their personal world view and epistemology. By changing one or the other they may find a greater congruence and satisfaction with their teaching. Finding a practice and belief that are not only consistent with one another, but that are effective, is an important task of the teacher.

Research indicates three cognitive requisites for teacher change: "the construction and personalization of a commitment to change; the creation of a vision of what teaching and learning environments could be like and the personalization of that vision; and reflection." (Tobin, 1990, p. 24). Tobin goes on to state:

The objects and tools of reflection exist as constructions of the mind. When we reflect on



practice, we are reflecting on re-constructed images of what we remember from our classroom experience. In this case the process of reflection involves the assignment of language to components of dynamic images which are re-constructed in the process of reflection. However, we can go beyond the assignment of language to images during reflection. Reflecting on the epistemologies, metaphors, beliefs, values and myths that underlie practice also can be beneficial. (1990, pg. 25).

Teachers can reflect upon their own dominate metaphors, build a vision of what teaching should be like, develop a commitment to that vision and begin applying it. As they apply their vision they will further reflect on it in their new practice and will go through this change process in an ongoing basis. Conflicts can occur as teachers are reflecting on their practice and begin changing aspects of their teaching while leaving other aspects intact. For instance, one may practice a philosophy of discovery and student involved learning, yet have assessments that emphasize content centered book responses, or teachers may use different metaphors in their teaching, such as when a teacher acts on one level as a technician but on another level as a social service provider.

The value of the metaphor as a teaching device, is further describe.

In addition to exercising our faculty of discernment, we are also extracting the meaning for ourselves instead of having the meaning imposed on us. Therefore, the metaphorical process is indirect and objective in that the teacher who employs it is a step removed from the analogical teaching device. In effect, if we as students are to obtain meaning, we must exercise our volition and examine the tenor and the vehicle for ourselves. When we apprehend the meaning on our own, we will not feel as if we have been told what to think, though we may be grateful to the one who has been creative enough to conceive the equation which led us to a new and richer understanding. (Hatcher, 1987, p. 80-81)

Perhaps the most important value of the metaphorical process is its function in human development. Without it man would not be able to transcend the physical world, even for a moment, because in this life abstract thought is impossible without the use of analogy. (Hatcher, 1987, p. 81)

Teachers can explain the inward realities with outward examples, hidden meanings or visible allusions, and spiritual matters with material comparisons.

Teachers as Parents

A popular metaphor we can look to for ideas on how educators might better teach is that of teacher as parent. The roles and responsibilities of parents have served as guidance to teachers for many years. The legal principle of in loco parentis, in the place of the parents, was the guiding idea of the role of teachers-they act as parents to the students, with the same rights, responsibilities and authority, while they are in the schools. This principle and metaphor are



gradually being replaced as the courts grant more rights to the students.

Just as children have obligations to their parents and parents have certain rights and responsibilities to their children, teachers and students each have certain obligations, rights and responsibilities. The classroom or school is like an extended family. The rules, virtues, integrity of the family can be considered. The rights of the individuals and the group are both important.

Like parents, the teacher of the classroom must educate students according to the rules and virtues of the school. The rights, obligations and perogatives of each member in a school and classroom must be considered. Like parents with their children, teachers must develop students' knowledge and character. Both serve a role models and authority figures.

We can see parents as teachers or teachers as parents, as both comparisons shed insight on each other. There are differences, so like all comparisons we must be cognizant of the limitations. Some differences involve differing levels and kinds of responsibility, concern, attention, emotional attachment and roles. Briefly stated, the differences involve the depth, nature, quantity and quality of the contact--teachers relate to a classroom of students for a limited time with limited responsibilities, while parents have full-time responsibilities for one of those students. A teacher with a class would be like a single parent with thirty same-aged children. The settings and conditions differ, so the expectations also should differ.

Teachers as Gardeners

A "fruitful" metaphor for teachers to consider is that of the teacher as gardener. It is a transcultural metaphor. This metaphor's powerful imagery, simple language, broad appeal and elegance make it a very useful tool. Almost everyone has had some experience with plants, even those living in frozen or desert regions. Most people understand the relationship between plants, water and sun, and the role that a gardener plays. Many people have personally worked with plants and appreciate the care they need to grow properly. The teacher is like a gardener in that both plant seeds, water them, fertilize them and care for them so that they can grow to maturity and bear fruit.

Children are like young plants. Knowledge is to children as rain is to plants. In the same manner, the image of the loving gardener tending young plants gives rise to insight and inspiration for teachers as they take on the challenging and vitally important task of educating their students. For example, each different plant has needs and requirements to grow well. Some need special care and some are hardy. Others may need transplanting, support, lots of sun and water. The gardener knows how to supply the right conditions for healthy growth and development. Teachers often try to give enough sun, water and nutrients for the average student, which may be too much for some and too little for others. Teachers must not try to change the original nature of the plants, just give them the best conditions for growth. Some plants may need grafting, transplanting, thinning, support or other intervention to help them bear good fruit.

Teachers as Prophets

Prominent historians (e.g., Toynbee, 1948) and philosophers (e.g., Jaspers, 1962) regard the founders of the world religions, such as Buddha, Jesus and Muhammad, as the preeminent



teachers of humanity. These prophets are like teachers in several ways--people are like children in a school and prophets are like their teachers. How are teachers similar to prophets? How can the role of the prophet be used to shed light on the role of the teacher?

Prophets, by their lives and their words change the people and the world. They are considered perfect mirrors in which people can see the reflection of God. By looking to them, people can learn about God. This physical world can also reflect a heavenly kingdom if people follow the prophet and arrange it properly. The plan for arranging it properly is given by the prophets in their lives, teachings and laws. Prophets give the law, bring knowledge and spirit from a higher power, prepare their followers for the future, are saintly and perform a host of other functions that might be similar to a teacher's role.

How do teachers relate to students as prophets related to humankind? What can be learned from the way the prophets have taught their students? Some aspects of prophets that teachers might reflect upon are that prophets teach and show love, but have high expectations for behavior. They are authorities in this world, but they represent a higher power who is the ultimate lawgiver and judge. Prophets take humanity from its limited beliefs to higher and richer life. This is not usually appreciated by humanity, who in turn persecutes the prophet and belittles his teachings. They often perform a miracle or two to get attention and win a little respect. They acknowledge the teachers that have come before them and foretell of teachers coming after them. Their message is for everyone, though only a few choose to follow it.

The teacher as prophet metaphor can be extended. If the teacher is like a prophet and the prophet is like a sun, how is the teacher like the sun? The relationship between the sun and this physical world might help better understand the relationship between teacher and student. For example, the sun (teacher) is vital for the world, but can only affect the world to the degree the sun shines on it and according to the capacity of the object receiving the sun's rays. A plant will respond differently to the outpourings of the sun than a mineral, and plants will vary from one another. Metaphorical images such as vanguards and day-springs, and images comparing the physical care of children to their spiritual care could also be employed.

The insights that can be gained from exploring the techniques and methods of the prophets in their role as educators of humanity can be seen, but the more concrete and familiar example of a school teacher can be also used to better understand the less concrete and less familiar role of the prophet. Like parents, teachers can represent the prophets at one level, but it is also true that the station of divine revelator is far above that of a teacher, and confusing the two is both wrong and dangerous. As with analogies, a form of metaphor, it is important to know the limitations of such comparisons, and not to carry them too far. As in mathematics, the transitive property works for some operations, but not for others.

Teachers as Pearl Oysters

Children are as pearls, teachers and education as the pearl oyster. As with all metaphors, an appreciation of it depends upon some understanding of at least one of the elements being compared. Most people have some rudimentary idea about how plants develop and can easily make some use of the analogy of children to plants. The development of pearls is less understood



and used.

To better understand the relationship between the child and education, we need some understanding of the relationship between the pearl and the oyster. The pearl is the result of some irritant, like a grain of sand, getting inside the shell of an oyster. The oyster then secretes calcium to encapsulate the irritant so that it lessens the irritation. The shell protects the meaty part of the oyster and the pearl and allows the transformation process to occur. The process of creating a pearl is very gradual with the oyster covering the object with more substance each day to make it a pearl, thereby transforming little by little the worthless piece of clay or sand into a beautiful and valuable pearl. Education and guidance can also transform a piece of clay, a human being, into a beautiful and wonderful creation. Without the shell of guidance and education, we remain as a worthless piece of clay. As teachers we need to transform the irritants in our shells into beautiful beings by daily bathing them with the education they need.

Teachers as Physicians

The teacher as doctor metaphor suggests the teacher should remedy faults and heal ailments. The doctor-patient relationship can shed light on the teacher-student relationship. First, people who are not well go to someone who knows more than them to help them get better. Getting better depends upon the doctor giving good remedies or healing, and the patient following the doctor's advice. Teachers must know how to remedy the intellectual and character deficiencies and teach their students. Teachers should know more than their students, not only about what they are teaching, but also how to teach. Like the doctor who must learn about the human body and the causes of health and disease, the educator must know how humans learn, how to promote that learning, and how to cure ignorance and diseased learning. Like doctors, if teachers harm their students they should be professionally liable for malpractice.

If a teacher as doctor tells students their intellectual health is not good, or that students have some problem in their thinking, they are not saying they are bad people, nor are they necessarily in anyway demeaning them, any more than would be physicians telling their patients that they have high cholesterol or some physical weakness. It is teachers' professional duty to diagnose and prescribe. Teachers can have a similar bias to intellectual illness that many people have for mental illness, blaming the afflicted one, as if it is their fault. When you are to do work that requires certain physical characteristics and abilities, it is common to demonstrate physical fitness. When you are to be a teacher, intellectual fitness should also be determined.

The teacher is like a physician in they both need to test to find out their client's condition, prescribe remedies, prevent problems and heal. Some patients cannot be healed based on the physician's knowledge and skill and must be recommended to a specialist. Some illnesses and problems take more and longer intervention to bring about good results. The patients must play some part in the healing process and their attitudes influence the doctor's ability to help. Ignorance is like lack of nutrition, exercise is like applying knowledge and disease is like destructive thinking. Schools should help students, but depending on their condition when the teachers see them will depend on what can be done to help. Some problems will have life long effects and others can be more easily remedied.



Conclusion

Metaphor is comparison, but different things can be compared for different reasons and to different effects. A good metaphor helps to actualize ideas. It makes an idea more vivid, understandable, explicit, and illuminating. The metaphor is used to describe spiritual, lofty or difficult ideas--concepts that are not easily grasped. The great teachers have all used metaphors, analogies, parables and allegories liberally in their teaching.

Our beliefs about knowledge, students and education influence our practices. The beliefs, images, about school influence metaphors about teaching. The current efforts to restructure and reform education might also be seen as efforts to restructure and reform the basic myths, beliefs, and metaphors of educators and the public about education.

By using metaphors and visuals images, educators can arrive at a deeper understanding of their role and responsibility as educators, the nature of education, and the relationships between the teacher and student. There are many useful metaphors. Deeper insight can be gained by contemplating on metaphors such as the teacher as prophet, physician and gardener. Looking at educational problems in the light of a prophet, gardener or doctor might give insight about how one should proceed. By discussing these metaphors with others, including your students, ever deeper insights can be gain. "Viewed in the context of our ever-expanding understandings of abstract concepts, the metaphorical process is an educational tool which can help provide unlimited development (Hatcher, 1987, p. 83)."

References

- Hatcher, J. (1987) The purpose of physical reality. Wilmette, IL: Baha'i Publishing.
- Jaspers, K. (1962). The great philosophers. (R.Manheim Trans.) New York: Harcourt, Brace. (Original work published 1957).
- Johnson, M. (1987). The body in the mind: The bodily basis of meaning, imagination, and reason. Chicago: University of Chicago Press.
- Kagan, D. (1992). Professional growth among preservice and beginning teachers. Review of Educational Research, 62(2), 129-169.
- McArthur, T. (Ed.) (1992). The Oxford companion to the English language. Oxford: Oxford University Press.
- Schon, D. (1983). Reflective practitioner: How professionals think in action. New York: Basic
- Tobin, K. (April, 1990). Metaphors in the construction of teacher knowledge. Paper presented at Annual Meeting of the American Education Research Association, Boston, MA.
- Toynbee, A. (1948). A study of history. London: Oxford University Press.
- Weaver, R. (1967). A rhetoric and handbook. New York: Holt, Rinehart and Winston.

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